We claim:

1. A method for selectively expanding or deleting at least one T cell from a T cell population, comprising:

(a) providing a ligand that binds to at least one T cell in said T cell population with a desired avidity; and

(b) contacting said T cell population with an effective amount of said ligand under conditions wherein the T cells that bind to said ligand with an avidity higher than the desired avidity are deleted, the T cells that bind to said ligand with an avidity lower than the desired avidity are expanded, and the T cells that do not bind said ligand are unaffected.

2. The method of claim 1 wherein said ligand is prepared by the steps comprising:

(i) providing a test ligand which is recognized by said at least one T cell in said T cell population;

(ii) preparing a series of ligand mimics based on said test ligand;

(iii) determining the binding avidity of said test ligand and said series of ligand mimics to said at least one T cell; and

(iv) selecting the ligand mimics in said series of ligand mimics that bind to said at least one T cell with the desired avidity.

3. The method of claim 1 wherein the T cells deleted in step (b) are auto-reactive T cells.

4. The method of claim 3 wherein the auto-reactive T cells mediate insulin-dependent diabetes mellitus (IDDM).

5. The method of claim 4 wherein the ligand is selected from the group consisting of NRP-A4, NRP-I4, NRP, NRP-A7 and NRP-V7.

6. The method of claim 1 wherein the T cells expanded in step (b) recognize pathogenic or tumor antigens.

7. The method of claim 1 wherein the ligand is a peptide.

8. A method of preventing, ameliorating or treating an autoimmune disease which is caused by at least one auto-reactive T cell in a mammal, comprising:

(a) providing a ligand which binds to said at least one auto-reactive T cell with a desired avidity; and

(b) administering to said mammal an effective amount of said ligand under conditions wherein the T cells which bind to said ligand with an avidity higher than the desired avidity are deleted, the T cells which bind to said ligand with an avidity lower than the desired avidity are expanded, and the T cells which do not bind said ligand are unaffected.

9. The method of claim 8 wherein said ligand is prepared by steps comprising:

(i) providing a test ligand which is recognized by said at least one auto-reactive T cell;

(ii) preparing a series of ligand mimics based on said test ligand;

(iii) determining the binding avidity of said test ligand and said series of ligand mimics to said at least one auto-reactive T cell; and

(iv) selecting the ligand mimics in said series of ligand mimics which bind to said at least one auto-reactive T cell with the desired avidity.

10. The method of claim 8 wherein said autoimmune disease is IDDM.

11. The method of claim 10 wherein the ligand is selected from the group consisting of NRP-A4, NRP-I4, NRP, NRP-A7 and NRP-V7.

12. The method of claim 8 wherein the ligand is a peptide.

13. A composition useful for selectively expanding a T cell clone or deleting a T cell clone, comprising a ligand which binds to at least one T cell in a T cell population with a desired avidity;
wherein contacting said T cell population with an effective amount of said ligand results in deletion of the T cells which bind to said ligand with an avidity higher than the desired avidity, and expansion of the T cells which bind to said ligand with an avidity lower than the desired avidity, while T cells which do not bind said ligand are unaffected.

14. The composition of claim 13 wherein the ligand is a peptide.

15. The composition of claim 14 wherein the peptide is selected from the group consisting of NRP-A4, NRP-I4, NRP, NRP-A7 and NRP-V7.

16. A pharmaceutical composition for preventing, ameliorating or treating a disease by selectively expanding or deleting a T cell, comprising a pharmaceutically acceptable excipient and an effective amount of a ligand which binds to at least one T cell in a T cell population with a desired avidity;
wherein contacting said T cell population with an effective amount of said ligand results in deletion of the T cells which bind to said ligand with an avidity higher than the desired avidity, and expansion of the T cells which bind to said ligand with an avidity lower than the desired avidity, while T cells which do not bind said ligand are unaffected.

17. The pharmaceutical composition of claim 16 wherein the ligand is a peptide.

18. The pharmaceutical composition of claim 17 wherein the peptide is selected from the group consisting of NRP-A4, NRP-I4, NRP-A7 and NRP-V7.